

Exhibit 23
(Excerpt)
(Under Seal)

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

UNITED STATES OF AMERICA,
et al.,

Plaintiffs,

v.

GOOGLE LLC,

Defendant.

Case No. 1:23-cv-00108-LMB-JFA

**Expert Report of Judith A. Chevalier
January 23, 2024**

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

e) **Prof. Simcoe Fails to Account for Differences in the Quality of AdX Relative to Competing Exchanges**

84. In a marketplace in which different exchanges provide services of differing quality, a range of revenue shares is to be expected. Notably, Plaintiffs’ experts also acknowledge the importance of quality when comparing prices. For example, Prof. Lee emphasizes the importance of examining “quality-adjusted” prices.¹⁶⁹ Similarly, Prof. Simcoe emphasizes that ad exchanges are “differentiated products,” with a “number of features that differ across rival ad exchange ... implementations,”¹⁷⁰ and he attributes the variation in advertiser CPMs across exchanges partially to differences in exchanges’ features and quality.¹⁷¹

85. Despite recognizing that quality differences can affect prices, Prof. Simcoe inappropriately assumes that any differences between AdX’s revenue share and the revenue shares of competing exchanges are attributable to the alleged anticompetitive conduct, without considering whether any difference could instead be explained by differences in the quality of AdX’s offering relative to other exchanges. As a matter of economics, a firm with higher quality products would be expected to charge higher prices.

86. Marketplace research studies conducted by Advertiser Perceptions from 2018 to 2022 show that GAM, which encompasses both AdX and DFP, is the most preferred SSP among publishers.¹⁷² The Advertiser Perceptions studies identify four main categories of drivers of publisher consideration and retention of SSPs, each of which is further broken down into various

¹⁶⁹ See Expert Report of Robin S. Lee, Ph.D., *United States of America, et al. v. Google LLC*, No. 1:23-cv-00108-LMB-JFA, December 22, 2023 (“Lee Report”), ¶¶ 248, 332, 338, 356, 381, 452.

¹⁷⁰ Simcoe Report, ¶ 146.

¹⁷¹ Simcoe Report, ¶ 85 (“The price dispersion in Figure 7 reflects differences in the nature and quality of publisher inventory sold through each exchange, as well as differences in demand, costs and other features of the auction process across the exchanges.”).

¹⁷² Exhibit 16. Advertiser Perceptions, “Supply-Side Platforms Study” includes standalone ad exchanges such as Index Exchange and SpotX, as well as ad exchanges that are integrated with Publisher Ad Servers, such as Google Ad Manager, PubMatic, Magnite and Xandr.

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

subcategories: (i) Platform Capabilities Criteria; (ii) Partnership Criteria; (iii) Performance Capabilities Criteria; and (iv) Leadership Criteria.¹⁷³ GAM has been ranked by publishers as the most-preferred SSP across most subcategories in the vast majority of iterations of the survey.¹⁷⁴

87. For example, within the “Platform Capabilities” criteria category, GAM generally has ranked well above all competitors surveyed in nearly every subcategory, notably including “Ease of Use,” “Data Available in the Platform,” and “Data Privacy and Security.”¹⁷⁵ Competing SSPs such as Magnite and Xandr generally rank much lower than GAM in the surveys. For example, while GAM led the “Ease of Use” subcategory in 8 out of 9 iterations of the study where that topic was covered, both Magnite and Xandr ranked last in that subcategory in one iteration of the study.¹⁷⁶ Within the “Partnership Criteria” category, GAM generally has ranked well above competitors in “Alignment with Publisher Goals and Needs,” leading that subcategory in 7 out of 9 iterations of the study where that topic was covered.¹⁷⁷ Within the “Performance Capabilities” category, GAM generally has ranked well above competitors in “Monetization and Revenue Generation Capabilities,” leading that subcategory in 7 out of 8 iterations of the study where that topic was covered.¹⁷⁸

88. Additionally, Google and third-party documents and data indicate that Google invested in protections against invalid traffic and that AdX blocked more malware and spam than competing exchanges.¹⁷⁹ Some competing exchanges at times experienced such high spam rates

¹⁷³ Advertiser Perceptions, “SSP Report, Wave 4,” 2019, GOOG-AT-MDL-004168924, at 951.

¹⁷⁴ Exhibit 16.

¹⁷⁵ Exhibit 16, Columns [GZ]-[HH], [HJ]-[HQ], [HV]-[HZ], [IT]-[IU], [IW]-[JA].

¹⁷⁶ Exhibit 16, Columns [GZ]-[HH].

¹⁷⁷ Exhibit 16, Columns [J]-[R].

¹⁷⁸ Exhibit 16, Columns [CD]-[CL].

¹⁷⁹ “Proving the Value of our Exchange Business,” March, 2017, GOOG-DOJ-11357824, at 828; “Search & Display Ads 2019 Strategic Planning - Ads Integrity,” October 12, 2018, GOOG-DOJ-06241817, at 818-819 (outlining 2019 focus areas for protecting against ad spam); Omnicom, “Programmatic Landscape: Supply,” March, 2017, OMC-GOOG-00003086, at 103 (“From a fraud point of view, we believe AdX is one of the best exchanges in market in minimizing fraud.”)

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

that the majority of ad traffic on those exchanges was fraudulent.¹⁸⁰ Prof. Simcoe's report cites Google testimony, discussing AdX's high-quality features, including publishers' ability to review insights on their monetization efforts through AdX's reporting functions; publishers' ability to block inappropriate or otherwise unwanted content on their webpages through AdX's anti-fraud, anti-spam, and anti-malware services; and AdX's buyer protection against the purchase of low-quality inventory.¹⁸¹

¹⁸⁰ "AWBid AdSpam/Publisher Quality Investigation," December, 2014, GOOG-AT-MDL-019245435, at 436 (noting that for "PulsePoint there were traffic issues so severe that [Google] eventually had to stop bidding on the exchange altogether (95% of click and impression traffic was deemed as invalid)"); "Awbid Update: Rmkt Area Review," October 23, 2015, GOOG-DOJ-13518329, at 351 (internal Google document finding 70% of clicks from PubMatic and 98% of clicks from PulsePoint to be spam upon a manual review); Rodgers, Zach, "AppNexus Details How It Is Policing Ad Fraud And Domain Masking," AdExchanger, June 10, 2015, <https://www.adexchanger.com/online-advertising/appnexus-details-how-it-is-policing-ad-fraud-and-domain-masking/>, accessed December 11, 2023; Rodgers, Zach, "A New AppNexus? CEO O'Kelley Talks About Ch-Ch-Changes On Eve Of Expected IPO," AdExchanger, October 22, 2015, <https://www.adexchanger.com/platforms/a-new-appnexus-ceo-okelley-talks-about-ch-ch-changes-on-eve-of-expected-ipo/>, accessed December 11, 2023 (as much as 65% of supply on the AppNexus exchange was invalid); Omnicom, "Programmatic Landscape: Supply," March, 2017, OMC-GOOG-00003086, at 105 ("Like AppNexus, PubMatic did work with many of the 'Bad Actors' like bot farms and dubious inventory aggregators in the early years.... Recently, we have experience[d] a major fraud case with PubMatic. Our investigation led us to believe it wasn't intentional. We have demanded better controls for the future or we will cease our relationship."). Deposition of Brian O'Kelley (AppNexus), Sept. 29, 2023, at 311:14-312:10 ("Q. Did AppNexus subsequently experience issues with ad fraud? A. We did. Q. What happened? A. It wasn't just AppNexus. It was the entire industry had -- partially, because it was such a new set of technologies, there were many loophole where bad actors could insert various kinds of invalid traffic into -- basically, into this set of programmatic platforms. And so, for years, the whole industry was fighting this through third-party technologies, through, you know, data science, through, you know, all kinds of things. So I think AppNexus, like everybody else, had a team of people focusing on fraud and trying really hard to get that fraud off the platform."). See also Simcoe Report, ¶ 53 & n. 65.

¹⁸¹ Deposition of Sam Cox (Google), October. 26, 2020, at 35:10–36:13 ("What might lead a customer to choose Google over, say, Rubicon or use as - for its use? A. There are lots of different things that each individual partner or participant - again, these are multisided businesses - that would persuade someone to work with it. Some of the things that make AdX, in my opinion, special are we have really great anti-fraud and anti-spam and anti-malware. We provide publishers with really high quality controls to make sure that inappropriate content doesn't get delivered from a marketer on to their page, so the ability to control or moderate an advertiser's demands on behalf of the publishers. You know, our ability to do reporting, help them have insights. All of these things are attributes that the entire, you know, that each individual business competes on and is evaluated on. Buyers also look to make sure that the traffic is of high quality, doesn't have significant amounts of spam or invalid traffic, which is fun with robots, which is part of what Ads.txt tried to help stop."); Deposition of Chris LaSala (Google), August 17, 2023, at 630:10–630:19 ("Q. Okay. Is brand protections for publishers another value that Google Ad Exchange offered? A. Yeah, that's fair. I kind of put that in the bucket of, like, fraud and spam protection, but you're right, that's a little bit different."); Deposition of Scott Sheffer, July 20, 2021, at 266:19–268:17 ("My question is, why couldn't publishers get identical marketing demand and yield on other exchanges as they did on AdX? A. [] So the second one is - so inventory quality is another one. So, again, like, as we do on the advertiser-facing side, on the publisher-facing side, we have a pretty rigorous process to stop bad publishers from coming into the network or bad inventory from surfacing. So we tend to remove that as well, and so that's another way in which other exchanges might - might

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

his estimates are sensitive to small changes in the specification, which renders his model unreliable.

a) Professor Simcoe’s Analysis Incorrectly Presumes that an Increase in AdX Impressions after UPR’s Introduction is a Measure of the Alleged Anticompetitive Conduct and Not Other Factors, such as Advertiser and Publisher Benefits Associated with Google’s Transition to UPR and UFPA

101. Prof. Simcoe’s Event Study Approach rests on the unwarranted and inappropriate assumption that any incremental AdX impressions associated with the introduction of UPR are a result of Google’s historical anticompetitive conduct, specifically the tying claims.²²² This conclusion rests on a number of unfounded assumptions.

102. First, while Prof. Simcoe claims that Google’s ability to “impose” UPR “is an indication of the degree of market power created by the ties between Google Ads, AdX, and DFP,”²²³ and that Google “could not implement UPR in the but-for world” without the alleged ties,²²⁴ he provides no evidence or analysis to support this claim. Second, Prof. Simcoe interprets, without evidence or analysis, that the increase in AdX impressions coincident with his time window after the introduction of UPR provides an indication of the impact of this past conduct.²²⁵ Importantly, he ignores the prospect that the increase in AdX impression could have been driven by other factors, such as the advertiser and publisher benefits of UPR or the benefits from Google’s transition to UFPA, which occurred at the same time.²²⁶

103. I have reviewed evidence showing that publishers benefited from UPR in several ways. Some publishers benefited from UPR because they viewed having to set differentiated floors

²²² Simcoe Report, ¶ 226.

²²³ Simcoe Report, ¶ 149.

²²⁴ Simcoe Report, ¶ 226.

²²⁵ Simcoe Report, ¶ 226.

²²⁶ Simcoe Report, ¶ 157; Simcoe Report Errata, ¶ 157; *See also* Google Ad Manager, “[Comms Doc] - Ad Manager Unified 1st Price Auction - go/1p-pub-comms,” September 27, 2019, GOOG-DOJ-09714662, at 662-663.

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

across exchanges as time-consuming and costly to manage. For example, Ken Blom, Executive Vice President of strategy and operations at BuzzFeed,²²⁷ testified that he and his team favor the UPR functionality²²⁸ because it simplifies their monetization efforts. Specifically, Mr. Blom noted that “for [his] team to manually be changing bids all the time is a pretty laborious task” and therefore his “ad ops team and [] programmatic technical account managers like using [UPR],”²²⁹ and concluded that UPR is a tool that allows his team to “create efficiency.”²³⁰ Similarly, a Xandr document includes “ensur[ing] all SSP partners are passing price floors in a consistent manner” among sellers’ best practices and observes that “pass[ing] through a consistent set of price floors ... reduces the operational burden of managing price floors individually with each of your SSP partners.”²³¹ These views are consistent with Google’s stated goal of benefiting publishers by simplifying their monetization strategies, as shown by internal documents and deposition testimony.²³²

²²⁷ Deposition of Ken Blom (BuzzFeed), August 29, 2023, at 8:17-8:19.

²²⁸ Deposition of Ken Blom (BuzzFeed), August 29, 2023, at 73:5-73:8.

²²⁹ Deposition of Ken Blom (BuzzFeed), August 29, 2023, at 72:4-72:18.

²³⁰ Deposition of Ken Blom (BuzzFeed), August 29, 2023, at 140:17.

²³¹ “Seller Best Practices,” Xandr Documentation Center, May 5, 2023, <https://docs.xandr.com/bundle/industry-reference/page/seller-best-practices.html>, accessed January 16, 2024.

²³² GOOG-DOJ-AT-00593475, at 475 (“[I]t’s widely believed that managing rules is far too difficult. This is because while the mechanisms are simple, it turns out they require complex configurations for even basic use-cases.”); Deposition of Sam Cox (Google), October 26, 2020, at 234:23-238:11 (“[A]s technology improves, its ability to be more precise gets better, and that’s probably a good thing. And so producing a floor for an entire exchange is very inefficient, it’s a blunt tool, if you will, that can lead to unexpected loss, oddly enough, as people try and engage a strategy to try and push things or pick floors – picking floors is very hard. And so what we’re talking about here, can we get publishers to segment better, which is to make smaller groupings out of things, so that they can be more precise Flooring a buyer’s platform ... was a blunt tool from like the early days of the exchange when there was no way to know who the advertiser was behind the bid. As we got better resolution on that, it makes more sense to focus on who is actually buying than to focus on the platform that they’re doing it through.... [W]e moved from buyer pricing rules to advertiser pricing rules so that buying platforms would not be punished, but that a publisher could choose more specifically how to set better, more granular floor prices overall”). *See also* “PRD: Unified Pricing Rules,” October, 2017, GOOG-DOJ-15123582, at 582-583; “Unified 1st Price Auction, Simplifying the Auction on Ad Manager,” September 3, 2019, GOOG-DOJ-07782646, at 665-666.

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

104. After the implementation of UPR, multiple publishers, including Reuters, Major League Baseball, and the Washington Post, expressed positive feedback.²³³ Other publishers like the New York Times and The Weather Company, which typically implemented a large number of pricing rules, expressed worry about the consequences of the implementation of UPR for their business.²³⁴ However, a February 2020 Advertiser Perceptions SSP survey showed that, among 150 publisher respondents, only 4 percent of the publishers viewed UPR as having a negative impact on their business, 55 percent reported no change or neutral impact, 30 percent reported a positive impact, and 10 percent responded “Don’t Know.”²³⁵

105. The adoption of UPR-like uniform floors across exchanges by publishers was discussed, and its potential benefits were recognized, in the ad tech industry prior to Google’s adoption of UPR in 2019. For example, in 2017, Brian O’Kelley (then AppNexus’ CEO) wrote a blogpost in which he discussed buyers’ and sellers’ strategies in the context of display advertising.²³⁶ In this blogpost, Mr. O’Kelley explained that “[p]ublishers should set uniform hard floors” and that “in a first price auction ... [t]hese floors should be consistent across intermediaries for a given impression, but could [vary] by buyer.”²³⁷ This observation by Mr. O’Kelley closely matches how Google implemented UPR when it transitioned to a first-price auction.

106. UPR benefited advertisers as well. UPR protected multi-homing advertisers from publishers that set exchange-discriminatory floor prices for the same impression and allowed the

²³³ GOOG-DOJ-03229061, at tab “LPS AMS Feedback UPR.” *See also* Rubicon Project, “Google Feedback Discussion,” May 2019, GOOG-DOJ-13499785, at 786, 788 (feedback from group of 30 buyers and sellers, moderated by Rubicon Project: “As a group, we generally support the intent of Google’s proposed changes: to unify disparate processes into a single, common and fair auction to eliminate some of the complexity of managing multiple demand sources and auction types in GAM; and to promote a transparent pricing model.”).

²³⁴ Sluis, Sarah, “Publishers Lash Out Against Google Over ‘Unified Pricing’ Changes,” AdExchanger, April 18, 2019, <https://www.adexchanger.com/online-advertising/publishers-lash-out-against-google-over-unified-pricing-changes/>, accessed January 5, 2024.

²³⁵ Advertiser Perceptions, “SSP Report, Wave 5,” 1H 2020, GOOG-DOJ-AT-00608572, at 572-573, 577.

²³⁶ Deposition of Brian O’Kelley - Exhibit 8, September 29, 2023.

²³⁷ Deposition of Brian O’Kelley - Exhibit 8, September 29, 2023.

HIGHLY CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

108. Further, UPR was implemented in conjunction with Google’s transition from running a second-price auction in AdX to a unified first-price auction (“UFPA”).²⁴³ The same February 2020 Advertiser Perceptions survey mentioned above in the context of UPR, also had a question about UFPA. It found that 47 percent of publishers reported a positive impact of UFPA on their business, 43 percent reported no change or neutral impact, 4 percent reported a negative impact, and 6 percent reported “Don’t Know.”²⁴⁴ Deposition testimony also suggests that Google expected the implementation of UFPA to provide benefits through the promotion of simplicity and transparency for the auction process.²⁴⁵ Further, an internal Google document on UFPA notes that in a first price auction, there’s “no need to constantly refine floors for short terms value extraction,” and that “[c]onstantly raising or lowering floors is unlikely to increase revenue, as buyers don’t immediately react,” “[h]owever, floors can influence buyers in the long term and are still useful to protect inventory value.”²⁴⁶ In light of the positive reception and effects of the simultaneous transition to UFPA for Google’s customers, it is unreasonable for Prof. Simcoe to assume that all of the incremental AdX impression sales that he measures in his regression could be attributed to the introduction of UPR alone.²⁴⁷

109. In summary, although he measures an increase in AdX impressions after Google implemented UPR, Prof. Simcoe has no basis for attributing any increase to the alleged anticompetitive conduct. UPR provided benefits to both advertisers and publishers and it was

²⁴³ See, e.g., Simcoe Report, ¶ 157.

²⁴⁴ Advertiser Perceptions, “SSP Report, Wave 5,” 1H 2020, GOOG-DOJ-AT-00608572, at 573, 577.

²⁴⁵ See, e.g., Deposition of Nitish Korula (Google), October 28, 2021, at 96:22-97:1.

²⁴⁶ “Unified 1st Price Auction, Simplifying the Auction on Ad Manager,” September 3, 2019, GOOG-DOJ-07782646, at 666.

²⁴⁷ For example, while Prof. Simcoe cites to Google studies about UPR to support his claim that UPR benefited AdX to the detriment of rival exchanges (see Simcoe Report, ¶ 119 & n. 175-180; Simcoe Report Errata, ¶ 119), he does not consider other studies about the impact of UFPA. For example, one study found that the unified first price auction feature (which was implemented in and around the same time as UPR) led to 43 percent higher impressions on AdX. See “Changes to Ad Manager, AdMob Auction,” August 3, 2019, GOOG-DOJ-AT-02204351, at 361.